

WHAT IS CLAIMED IS:

1. A method for printing a liquid onto a sheet material, comprising the steps of:
providing a porous printing surface having apertures;
extruding a first liquid from the printing surface apertures onto the printing surface;
applying a second liquid over and in contact with the first liquid on the printing surface; and
contacting the sheet material with the printing surface to print the second liquid onto the sheet material.
2. The method of Claim 1 further comprising the step of controlling an extruded amount of the first liquid in proportion to an amount of the second liquid being applied.
3. The method of Claim 1 further comprising the step of controlling an applied amount of the second liquid in proportion to an area of the sheet material being processed.
4. The method of Claim 1 wherein the printing surface has a pattern zone and a non-pattern zone and the first liquid is extruded from the printing surface apertures in the pattern zone but is substantially not extruded from the printing surface apertures in the non-pattern zone.
5. The method of Claim 4 wherein the pattern zone is raised in relief.
6. The method of Claim 1 wherein the sheet material is a substantially continuous web.
7. The method of Claim 1 wherein the sheet material is a film.
8. The method of Claim 1 wherein the printing surface is an outer surface of a process roll.
9. The method of Claim 8 further comprising the step of rotating the process roll at a tangential velocity substantially equal to a machine direction velocity of the sheet material.
10. The method of Claim 8 further comprising the step of controlling a temperature of the process roll.
11. An apparatus for printing a liquid onto a sheet material, comprising:

- a porous printing surface having apertures;
 - a first liquid delivery system for extruding a first liquid from the printing surface apertures onto the printing surface;
 - a second liquid delivery system for applying a second liquid over and in contact with the first liquid on the printing surface; and
 - an impressing mechanism for contacting the sheet material with the printing surface to print the second liquid onto the sheet material.
12. The apparatus of Claim 11 wherein the printing surface has a pattern zone and a non-pattern zone and the printing surface apertures in the non-pattern zone are substantially closed.
 13. The apparatus of Claim 12 wherein the pattern zone is raised in relief.
 14. The apparatus of Claim 11 wherein the printing surface is an outer surface of a process roll.
 15. The apparatus of Claim 14 wherein the process roll comprises a porous shell having an inner surface having apertures and passages communicating between the inner surface apertures and the printing surface apertures.
 16. The apparatus of Claim 15 wherein the porous shell comprises particles lodged in and restricting flow through the passages.